**Design & Technology**

The new programmes of study, although slimmer, still include the content and expectations from the 2000 curriculum. The new document is clearer and precise in describing the aims and requirements for D&T and raises the bar for expectations at each Key Stage.

**KS.1 Programmes of Study**

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| **Curriculum 2000** | **Curriculum 2014** | **Changes**  **and notes** |
|  | **Purpose of study**  Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. |  |
| Aims  During key stage 1 pupils learn:   * how to think imaginatively * and talk about what they like and dislike when designing and making. * They build on their early childhood experiences of investigating objects around them. * They explore how familiar things work * and talk about, draw and model their ideas. * to design and make safely and could start to use ICT as part of their designing and making. | **Aims**  The national curriculum for design and technology aims to ensure that all pupils:   * develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world * build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users * critique, evaluate and test their ideas and products and the work of others * understand and apply the principles of nutrition and learn how to cook. | Clear aims – 2000 aims fuzzy |
| **Developing, planning and communicating ideas**  1. Pupils should be taught to:   * generate ideas by drawing on their own and other people's experiences * develop ideas by shaping materials and putting together components * talk about their ideas * plan by suggesting what to do next as their ideas develop * communicate their ideas using a variety of methods, including drawing and making models | **Design**   * design purposeful, functional, appealing products for themselves and other users based on design criteria * generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology |  |
| **Working with tools, equipment, materials and components to make quality products**  Pupils should be taught to:   * select tools, techniques and materials for making their product from a range suggested by the teacher * explore the sensory qualities of materials * measure, mark out, cut and shape a range of materials * assemble, join and combine materials and components * use simple finishing techniques to improve the appearance of their product, using a range of equipment * follow safe procedures for food safety and hygiene. | **Make**   * select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] * select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics |  |
| **Evaluating processes and products**  Pupils should be taught to:   * talk about their ideas, saying what they like and dislike * identify what they could have done differently or how they could improve their work in the future. | **Evaluate**   * explore and evaluate a range of existing products * evaluate their ideas and products against design criteria |  |
| **Knowledge and understanding of materials and components**  Pupils should be taught to:   * about the working characteristics of materials * how mechanisms can be used in different ways | **Technical knowledge**   * build structures, exploring how they can be made stronger, stiffer and more stable * explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. |  |
| **Breadth of study**   * investigating and evaluating a range of familiar products * focused practical tasks that develop a range of techniques, skills, processes and knowledge * design and make assignments using a range of materials, including food, items that can be put together to make products, and textiles. | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. |  |
|  | **Cooking and nutrition**  As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.  Pupils should be taught to:  Key stage 1   * use the basic principles of a healthy and varied diet to prepare dishes * understand where food comes from. |  |

**KS.2 Programmes of Study**

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| **Curriculum 2000** | **New Curriculum** | **Changes** |
|  | **Purpose of study**  Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. |  |
| **Aims**  During key stage 2 pupils:   * work on their own and as part of a team on a range of designing and making activities. * They think about what products are used for and the needs of the people who use them. * They plan what has to be done and identify what works well and what could be improved in their own and other people’s designs. * They draw on knowledge and understanding from other areas of the curriculum and use computers in a range of ways. | **Aims**  The national curriculum for design and technology aims to ensure that all pupils:   * develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world * build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users * critique, evaluate and test their ideas and products and the work of others * understand and apply the principles of nutrition and learn how to cook. | Clear aims now |
| **Developing, planning and communicating ideas**  1. Pupils should be taught to:   * generate ideas for products after thinking about who will use them and what they will be used for, using information from a number of sources, including ICT-based sources * develop ideas and explain them clearly, putting together a list of what they want their design to achieve * plan what they have to do, suggesting a sequence of actions and alternatives, if needed * communicate design ideas in different ways as these develop, bearing in mind aesthetic qualities, and the uses and purposes for which the product is intended. | **Design**   * use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups * generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design |  |
| **Working with tools, equipment, materials and components to make quality products**  Pupils should be taught to:   * select appropriate tools and techniques for making their product * suggest alternative ways of making their product, if first attempts fail * explore the sensory qualities of materials and how to use materials and processes * measure, mark out, cut and shape a range of materials, and assemble, join and combine components and materials accurately * use finishing techniques to strengthen and improve the appearance of their product, using a range of equipment including ICT * follow safe procedures for food safety and hygiene. | **Make**   * select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately * select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities |  |
| **Evaluating processes and products**  Pupils should be taught to:   * reflect on the progress of their work as they design and make, identifying ways they could improve their products * carry out appropriate tests before making any improvements * recognise that the quality of a product depends on how well it is made and how well it meets its intended purpose | **Evaluate**   * investigate and analyse a range of existing products * evaluate their ideas and products against their own design criteria and consider the views of others to improve their work * understand how key events and individuals in design and technology have helped shape the world |  |
| **Knowledge and understanding of materials and components**  Pupils should be taught to:   * how the working characteristics of materials affect the ways they are used * how materials can be combined and mixed to create more useful properties * how mechanisms can be used to make things move in different ways, using a range of equipment including an ICT control program * how electrical circuits, including those with simple switches, can be used to achieve results that work. | **Technical knowledge**   * apply their understanding of how to strengthen, stiffen and reinforce more complex structures * understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] * understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] * apply their understanding of computing to program, monitor and control their products. |  |
| **Breadth of study**   * investigating and evaluating a range of familiar products, thinking about how they work, how they are used and the views of the people who use them * focused practical tasks that develop a range of techniques, skills, processes and knowledge * design and make assignments using a range of materials, including electrical and mechanical components, food, mouldable materials, stiff and flexible sheet materials, and textiles. | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. |  |
|  | **Cooking and nutrition**  As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.  Pupils should be taught to:  Key stage 2   * understand and apply the principles of a healthy and varied diet * prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques * understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. |  |